

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 April 2004 (08.04.2004)

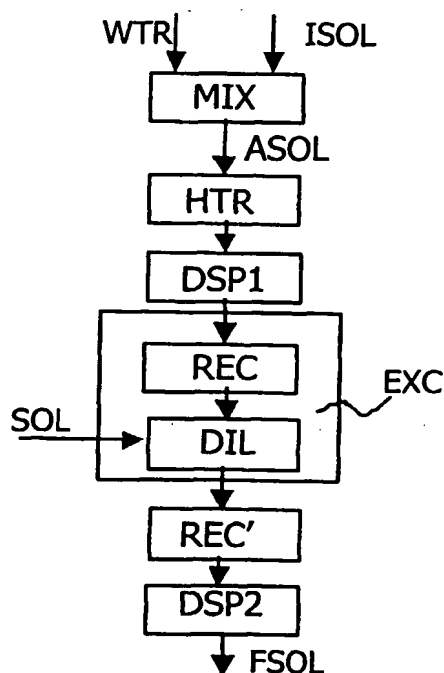
PCT

(10) International Publication Number
WO 2004/028973 A1

- (51) International Patent Classification⁷: C01G 23/053, B01J 37/03, 21/06, 35/00
- (21) International Application Number: PCT/IB2003/004141
- (22) International Filing Date: 15 September 2003 (15.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 02292351.0 25 September 2002 (25.09.2002) EP
- (71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LANGLET, Michel [FR/FR]; 156 Boulevard Haussmann, F-75008 Paris (FR). VAUTEY, Christophe [FR/FR]; 156, Boulevard Haussmann, F-75008 Paris (FR). KIM, Alexei [RU/FR]; 156, Boulevard Haussmann, F-75008 Paris (FR).
- (74) Agent: DE LA FOUCHARDIERE, Marie-Noëlle; Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: PROCESS TO PRODUCE SOLUTIONS TO BE USED AS COATING IN PHOTO-CATALYTIC AND TRANSPARENT FILMS



(57) Abstract: The invention relates to a process for producing a stable solution containing Anatase titanium oxide intended to be deposited on a substrate in order to obtain a transparent photo-catalytic coating. Such a process includes the preparation of an initial stabilized peptized solution including a titanium precursor material, an organic solvent, an acid agent, the mixing of said initial solution with a large amount of water, the pH of the obtained intermediate solution being less than 3, subjecting said intermediate solution and its dispersion to a heat-treatment, the exchange of water by an organic solvent with low surface tension to obtain a final solution that is finally dispersed. The invention particularly allows to coat thermally sensitive and/or transparent substrates with photo-catalytic films of high optical quality.